Work Order ID 121209 – 2

121209

June-18-14 8:45:52 AM

Item ID: D350-591-121 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Start Qty:** 5.00 *5*

Required Date: 6/19/14 **Req'd Qty:** 5.00 *5*

Reference: **Cust Item ID:**

Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr: D2351-041	Revision Nbr: Rev E								
100	Document Control	0.00				AUG 25 2014	DAS 06 9-89		
100	DOCUMENT CONTROL					1			
DC	**Memo**	0.00		DAS 9 9-89					
Doc Control -USB or Paperwork	Photocopy bluefile and type labels as per PPP D350-591-121 CHG005								
110		0.00				5		DMC 14-6-18	
110	Large Fab								
Large Fab	**Memo**	0.00							
Large Fab	1-Cut D2244-116 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G 2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets. 3-Deburr								

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: [illegible] Date 14/09/18

QA Closed: [illegible] Date: 14/9/15

Work Order: 121209

Part No. D350-591-121

NCR No. 14-4243.

DISPOSITION

Rework	☐
Scrap	☑
Use-as-is	☐
Work Order Update	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Crosstube	☐	Water Jet	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐
Large Fab	☑	Composite	☐	Supplier	☐

Engineering	☐
Quality	☐
Other	☐
	☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐	14/06/18			-operator cut angle on wrong side of step	DAS 16 9-89	scrap + replace D2244-116 880803	DMC 14/6/18	S 14/9/04	DAS 16 9-89
Operator	☑	HB	110	1	operator in training	03242				03242
Material	☐				R.C. operator not paying attention to drawing	14/6/18				14/6/18
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐	Bending
☐	Centre Not Concentric to O/S
☐	Cracks
☐	Crushed/Crimped
☐	Cuffs
☐	Heat Treat
☐	Inspection Strip in Tube
☐	Ripples in Bend
☐	Torque Waves in Extrusion
☐	Turning Sequence
☐	Wave/Twist in Tube

General

☐	Bend
☐	BOM/Route
☐	Broken/Damaged
☐	Burrs
☐	Contamination
☐	Countersink
☐	Cut Too Short
☐	Drill Holes
☐	Drawing
☐	Finish
☐	Folio
☐	Grain
☐	Hardware
☐	Inspection Incomplete
☐	Instructions Incomplete/Unclear
☐	Maintenance
☐	Mislabeled
☑	Misread
☐	Offset
☐	Out of Calibration
☐	Out of Sequence
☐	Outside Dimensions
☐	Ovalized
☐	Over/Under tolerance
☐	Part Incorrect
☐	Part Lost/Missing
☐	Part Moved
☐	Positioned Wrong
☐	Power Loss/Surge
☐	Pressure/Forced
☐	Temperature/Cure
☐	Weld
☐	Wrong Stock Pulled
☐	Other

Item ID: D350-591-121 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Start Qty:** 5.00 *5*
Required Date: 6/19/14 **Req'd Qty:** 5.00 *5*
Reference:

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
120	BENDING MACHINE - SKIDTUBES					QC 14/06/18			DHC 14-6-23
CNC Bend 1	Memo	0.00							
CNC Delta 100 Bender	Bend as per Dwg D2351-041 using CNC Bender 1 and Folio FT011. Use Bend Program D2351-041. ***BUFF AND REMOVE BENDING MARKS WITHIN .005", if deeper see engineer***								
130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									

DAS 03 9-89

14-6-18

Item ID: D350-591-121
Revision ID:
Item Name: Heli-Access-Step™ LH
Accept *N900040100*
Setup Start *NS1*
Stop *NS2*

Start Date: 6/18/14 **Start Qty:** 5.00 *5*
Required Date: 6/19/14 **Req'd Qty:** 5.00 *5*
Reference:
Cust Item ID:
Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							
140	Large Fab					4	0		14.07.22
Large Fab									
Large Fab	Memo	0.00							
	1-Bevel Fwd and Aft end for welding								
	2-Weld Aft End Bracket per QSI 004 & Dwg D2351 using Welding Jig DTS033 A/RAluminum Rod 128365								
	3-Do not Grind Flush								
150	QC9- Inspect visual per QSI004- Fusion Welds	0.00							DAS 24 9-89
150						4	14.7.22		
QC	Memo	0.00							
Quality Control									
160	QC5- Inspect part completeness to step on W/O	0.00							DAS 24 9-89
160						4	14/7/22		
QC	Memo	0.00							
Quality Control									

Item ID: D350-591-121 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Start Qty:** 5.00 *5* **Cust Item ID:**
Required Date: 6/19/14 **Req'd Qty:** 5.00 *5* **Customer:**
Reference:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Chemical Conversion Coat per QSI005 4.1	0.00				4			DK 14-07-25
170 HandFinish	Memo	0.00							
Hand Finishing									
180	QC7-Inspect Chemical Conversion Coat	0.00	DAS 38 9-89			(4)			
180 QC	Memo	0.00	14/07/31						
Quality Control									
190		0.00				4	4		14-08
190 Large Fab	Large Fab								
Large Fab	Memo	0.00							
	1-Rivet Leg Assembly as per Dwg D2351								
	2-Weld Fwd End Plate per QSI 004 & Dwg D2351 A/RAluminum Rod 125x41								
	3-Grind end cap flush per dwg D2351								

Item ID: D350-591-121 Accept *N9000040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Start Qty:** 5.00 *5* **Cust Item ID:**
Required Date: 6/19/14 **Req'd Qty:** 5.00 *5* **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	QC10- Inspect visual per QSI004- ground welds	0.00							
220						(4)	14-06-13		DAS 9 ~~9-89~~
QC	Memo	0.00							
Quality Control									
230	QC5- Inspect part completeness to step on W/O	0.00							
230						(4)	14-06-13		DAS 9 ~~9-89~~
QC	Memo	0.00							
Quality Control									
240	Chemical Conversion Coat per QSI005 4.1	0.00							
240						4	May 14 8-18		
HandFinish	Memo	0.00							
Hand Finishing									

Item ID: D350-591-121 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Start Qty:** 5.00 *5*
Required Date: 6/19/14 **Req'd Qty:** 5.00 *5*
Reference:

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 *250* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum m 125957. Memo START TIME: 10.30 OVEN TEMPERATURE: 82° FINISH TIME: 11.00	0.00 0.00				14	0	14-8-14	DAS 34 9-89
260 *260* HandFinish Hand Finishing	Wing Walk as per dwg QSI005 4.4 Batch 117981 Memo	0.00 0.00							
270 *270* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				(4)		14.08.22	DAS 9 9-89

Item ID: D350-591-121 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Start Qty:** 5.00 *5*
Required Date: 6/19/14 **Req'd Qty:** 5.00 *5*
Reference:

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	Pick Kit	0.00				DAS 28 9-89	AUG 25 2014		
280									
Packaging	Memo	0.00							
Packaging									
290	QC4- 100% Inspect kits for completeness	0.00	DAS 06 9-89			DAS 9 9-89	AUG 25 2014		
290									
QC	Memo	0.00							
Quality Control									
300		0.00				1	DAS [illegible] 9-89	AUG 25 2014	
300	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D350-591-121 Location _____ Ship PPP Rev: _____								

Item ID: D350-591-121 Accept *N9000401000* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Start Qty:** 5.00 *5* **Cust Item ID:**
Required Date: 6/19/14 **Req'd Qty:** 5.00 *5* **Customer:**
Reference:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
310	QC21- Final Inspection - Work Order Release	0.00				MLJ	14 08-25		
310									
QC	Memo	0.00							
Quality Control									

MLJ 14 08-25

Picklist Print

June-18-14 8:45:50 AM

Work Order ID: 121209

121209

Parent Item: D350-591-121

D350-591-121

Parent Item Name: Heli-Access-Step™ LH

F

Start Date: 6/18/14 **Required Date:** 6/19/14

Start Qty: 5.00 **Required Qty:** 5.00

Comments: IPP Rev:E02.10.21Re-format. Incorporated D2351-041 IPPKJ/RF
IPP rev. F 06.02.23 added grinding EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2244-116		Manufactured	No			110	Each	22.5000	0.5	3			
D2244-116 STEP EXTRUSION									**			14-06-18	
				Location		**Loc Qty**		**Loc Code**					
				WA003		22.4999632							
					60307	9							
					80803	9				2			
					89954	4.5							
D2850-1		Manufactured	No			140	Each	2.0000	1	5			
D2850-1 End Bracket									**			14-06-18	
				Location		**Loc Qty**		**Loc Code**					
				WA003	120280	2				3			
					111633	2				1			
D2582		Manufactured	No			190	Each	8.0000	1	5			
D2582 Hi-Skid Step Leg Ass'Y									**			DMC 14-08-07	
				Location		**Loc Qty**		**Loc Code**					
				WA003	121022	8				4 x			
					106091	2							
					111490	6							

Picklist Print

June-18-14 8:45:50 AM

Work Order ID: 121209

121209

Parent Item: D350-591-121

D350-591-121

Parent Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Required Date:** 6/19/14

Start Qty: 5.00 **Required Qty:** 5.00

MS20600-AD4W3	Purchased	No		190	Each	543.0000	16	80

MS20600-AD4W3

Cherry Rivets

**

DMC 14-8-07

Location	Loc Qty	Loc Code	
ST	480		
m129278	480		80 x
WA003	63		
m127476	63		

D2673-34	Manufactured	No		210	Each	99.0000	1	5

D2673-34

End Plate

**

14-08-05

Location	Loc Qty	Loc Code	
WA003	99		
113204	38		4
117775	61		

DAS 06 9-89

AN4-16A	Purchased	No		290	Each	206.0000	2	10

AN4-16A

Bolt

**

AUG 2 2 2014

DAS 26 9-89

DAS 9 9-89

Location	Loc Qty	Loc Code	
FG	5		
121541	5		
ST357	51		
M128324	19		
M128978	32		
ST515	150		
M128813	150		2

Work Order ID: 121209
121209
Parent Item: D350-591-121
D350-591-121
Parent Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Required Date:** 6/19/14
Start Qty: 5.00 **Required Qty:** 5.00

D2856-400	Manufactured	No		290	f	357.2000	0.6	3

D2856-400
Abrasion Strip 4" Wide (Per Foot)

**

123583

Location	Loc Qty	Loc Code
ST403	355.2	
112524	139.2	
117887	216	
ST408	2	
109578	2	

cut (1) at 7.20"

NAS1149D0463J	Purchased	No		290	Each	8,655.000	6	30

NAS1149D0463J
WASHER

**

AUG 2 2 2014

Location	Loc Qty	Loc Code
ST277	5000	
M129390	5000	
ST510a	3655	
16941	8	
M126221	20	
M127813	22	
M127904	1993	
M128591	112	
M128995	1500	

6

Work Order ID: 121209
121209
Parent Item: D350-591-121
D350-591-121
Parent Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Required Date:** 6/19/14
Start Qty: 5.00 **Required Qty:** 5.00

D2230-1	Manufactured	No		290	Each	441.0000	1	5

D2230-1
Mounting Lug

Location	Loc Qty	Loc Code
FG	4	
84136	4	
ST469	21	
101834	1	
110834	20	
ST470	416	
110834	12	
113437	124	
113438	1	
115306	119	
116380	160	

AN3-37A	Purchased	No		290	Each	90.0000	2	10

AN3-37A
Bo

Location	Loc Qty	Loc Code
FG	10	
119086	10	
ST353	80	
123355	80	

DAS 26 9-89
DAS 06 9-89
DAS 26 9-89
DAS 06 9-89
AUG 2 2 2014

Picklist Print

June-18-14 8:45:51 AM

Work Order ID: 121209

121209

Parent Item: D350-591-121

D350-591-121

Parent Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Required Date:** 6/19/14

Start Qty: 5.00 **Required Qty:** 5.00

MS21042L3	Purchased	No	290	Each	5,872.000	2	10

MS21042L3

**

Location	Loc Qty	Loc Code
ST314	164	
108816	9	
M126333	55	
M127410	13	
M127831	39	
M128401	48	
ST506	955	
123900	955	
ST509	4753	
M127831	2	
M128754	4751	

AN4-13A	Purchased	No	290	Each	1,242.000	3	15

AN4-13A

**

Location	Loc Qty	Loc Code
FG	20	
122808	20	
GA	14	
m125709	14	
ST515	1208	
m127432	36	
m127817	26	
m128403	146	
m128739	1000	

AUG 2 2 2014

Work Order ID: 121209
121209
Parent Item: D350-591-121
D350-591-121
Parent Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Required Date:** 6/19/14
Start Qty: 5.00 **Required Qty:** 5.00

MS21042L4	Purchased	No		290	Each	5.707.000	3	15

MS21042L4
Locknut
DAS 9 9-89

Location		Loc Qty	Loc Code
ST305		1000	
	m129472	1000	
ST314		44	
	m126015	12	
	m126275	32	
ST509		4652	
	m127255	71	
	m127813	976	
	m128300	80	
	m128798	3525	
ST518		11	
	m127376	11	

**
DAS 26 9-89
DAS 06 9-89
3
DAS 06 9-89

D2230-3	Manufactured	No		290	Each	284.0000	1	5

D2230-3
Mounting Lug
DAS 9 9-89

Location		Loc Qty	Loc Code
FG		7	
	109344	4	
	89045	3	
ST		159	
	116378	159	
ST469		118	
	108668	1	
	109344	3	
	114151	2	
	114921	112	

**
116379
DAS 26 9-89
AUG 2 2 2014

Work Order ID: 121209
121209

Parent Item: D350-591-121
D350-591-121

Parent Item Name: Heli-Access-Step™ LH

Start Date: 6/18/14 **Required Date:** 6/19/14
Start Qty: 5.00 **Required Qty:** 5.00

D2732-030	Manufactured	No		290	Each	166.0000	2	10

D2732-030
Rubber Cushion (Replaces P/N G13013-4)

**

123578

Location	Loc Qty	Loc Code
FG	97	
107346	80	
94725	17	
ST409	65	
112139	64	
114485	1	
ST410	4	
107346	4	

cut (2) at 3.00"

NAS1149D0363J	Purchased	No		290	Each	3.427.000	4	20

AUG 2 2 2014

NAS1149D0363J

**

Location	Loc Qty	Loc Code
GA	23	
124392	23	
ST510a	3404	
109061	9	
m126319	6	
m128429	3389	

4

DART

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
KE	PH		
CHECKED	APPROVED	DRAWING NO.	REV E
		D2351	SHEET 1 OF 2
DATE		TITLE	SCALE
05.11.14		HIGH FLOAT STEP ASSEMBLY	NTS

A	95.02.15	NEW ISSUE
B	97.05.22	END CAPS CHANGED
C	97.07.23	ADDED BUSHING AND FACING INFO
D	98.12.17	CHANGED TO BEND, D2850 REPLACES D2357 & D2358, INCORP. DEO 9084
E	05.11.14	UPDATE FINISHING NOTE

D2351 HIGH FLOAT STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY -041	QTY -042
D2351-041	**High Float Step Assembly (LH)**	X	
D2351-042	**High Float Step Assembly (RH)**		X
D2244-55.4	STEP EXTRUSION*	1	1
D2582	STEP LEG ASSEMBLY	1	1
D2673-34	STEP END PLATE	1	1
D2850-1	END BRACKET	1	
D2850-2	END BRACKET		1
MS20600AD4W3	RIVETS	16	16

*cut per drawing

W 01209

RELEASED
05.11.28

UNDER REVIEW
ECN 1105
07.11.29

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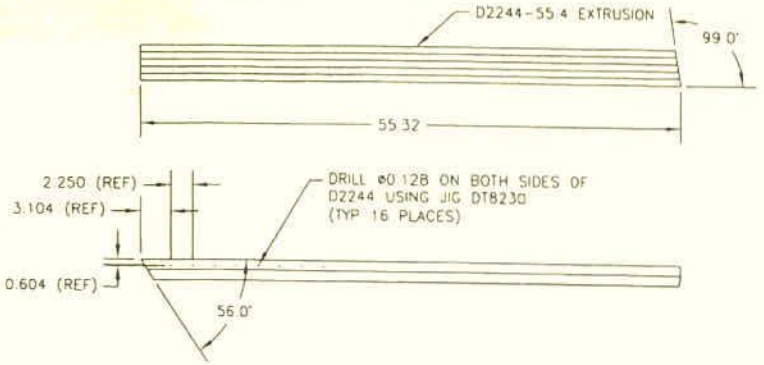
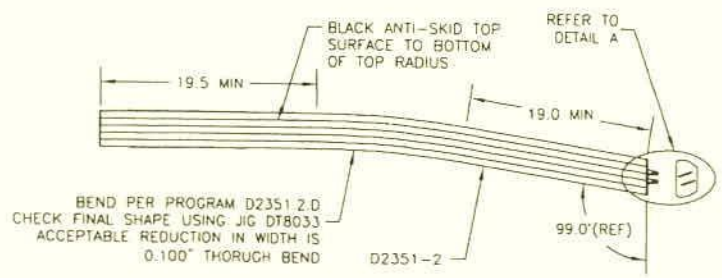
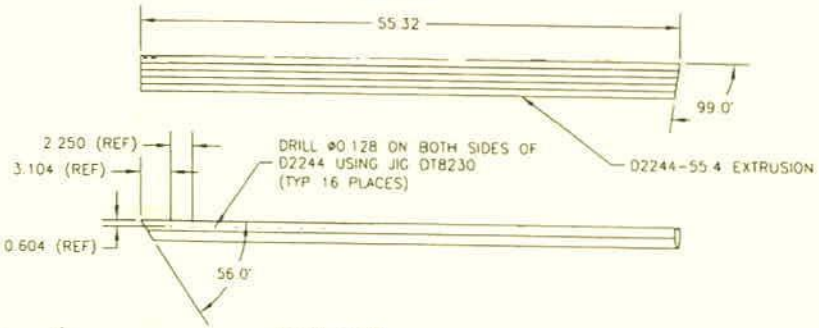
D2351-2 CUTTING/DRILLING DETAIL
RIGHT STEP



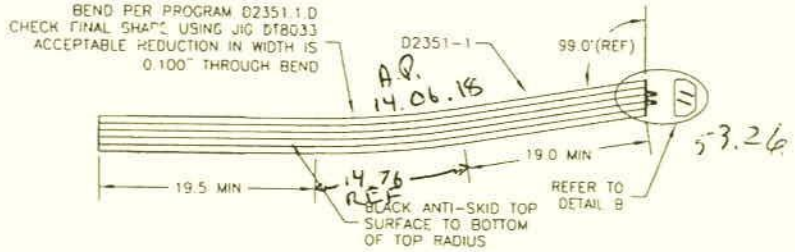
D2351-042 BENDING/ASSEMBLY DETAIL
RIGHT STEP

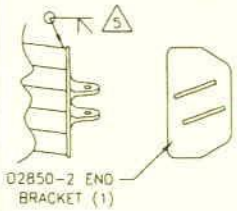


D2351-1 CUTTING/DRILLING DETAIL
LEFT STEP

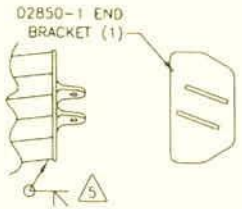


D2351-041 BENDING/ASSEMBLY DETAIL
LEFT STEP

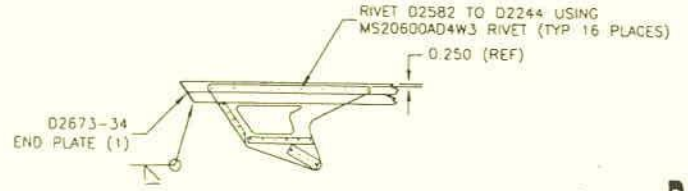




DETAIL A
SCALE 1:4



DETAIL B
SCALE 1:4



GENERAL NOTES
1) WELD PER DART QSI 004
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
3) ALL DIMENSIONS ARE IN INCHES
4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

5 CHAMFER D2244 EXTRUSION 0.075"x45° BEFORE WELDING D2850-1 OR D2850-2 IN PLACE. DO NOT GRIND FLUSH

RELEASED
05.11.28

UNDER REVIEW

ECN 105

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DESIGN	DRAWN BY	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
KE	PH	
CHECKED	APPROVED	DRAWING NO. D2351 REV. E
DATE 05.11.14		SHEET 2 OF 2
		TITLE HIGH FLOAT STEP ASSEMBLY SCALE 1:2

5. PARTS LIST

Qty -111A	Qty -113	Qty -115	Qty -117A	Qty -119	Qty -133	Part Number	Description
X						D350-591-111A	***Heli-Access-Step*** ™, Long Step – High Skid
	X					D350-591-113	***Heli-Access-Step*** ™, Short Step – High Skid
		X				D350-591-115	***Heli-Access-Step*** ™, Short Step – Low Skid
			X			D350-591-117A	***Heli-Access-Step*** ™, Pre-Flight Step
				X		D350-591-119	***Heli-Access-Step*** ™, Long Step – Low Skid
					X	D350-591-133	***Heli-Access-Step*** ™, Aft Maintenance Step
	1					D2310	STEP ASSEMBLY (HIGH-SHORT)
1						D2311	STEP ASSEMBLY (HIGH-LONG)
		1				D2354	STEP ASSEMBLY (LOW-SHORT)
				1		D2355	STEP ASSEMBLY (LOW-LONG)
					1	D2946-041	STEP ASSEMBLY (MAINTENANCE)
4	2	2	2	2		D2171	CLAMP
4	2	2	2	2		D2182B035	CUSHION
					4	D2230-1	MOUNTING LUG
					4	D2230-3	MOUNTING LUG
8	4	4	4	4		D2274	RADIUS BLOCK
			1			D2362-041	SUPPORT BRACKET
2	1			1		D2362-3	SUPPORT BRACKET
		1				D2362-5	SUPPORT BRACKET
2	1	1	1	1	2	D2856-400-720	ABRASION STRIP
					1	D2945	MOUNTING PLATE
2	2	2		2		AN3-37A	BOLT
					2	AN4-7A	BOLT
					4	AN4-11A	BOLT
					8	AN4-14A	BOLT
		4				AN4-16A	BOLT
8	4			4		AN4-20A	BOLT
1	1	1	4	1		AN4-22A	BOLT
4	4	4		4		AN960JD10	WASHER
10	6	2	4	6	14	AN960JD416	WASHER
		4				AN960JD416L	WASHER
2	2	2		2		MS21042L3	NUT
9	5	5	4	5	14	MS21042L4	NUT

Qty -121	Qty -122	Qty -123	Qty -124	Part Number	Description
X				D350-591-121	***Heli-Access-Step*** ™, Short Step – High Skid, LH
	X			D350-591-122	***Heli-Access-Step*** ™, Short Step – High Skid, RH
		X		D350-591-123	***Heli-Access-Step*** ™, Short Step – Low Skid, LH
			X	D350-591-124	***Heli-Access-Step*** ™, Short Step – Low Skid, RH
1				D2351-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1			D2351-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1		D2356-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1	D2356-042	STEP ASSEMBLY (LOW-SHORT, RH)
1	1	1	1	D2230-1	MOUNTING LUG
1	1	1	1	D2230-3	MOUNTING LUG
1	1	1	1	D2856-400-720	ABRASION STRIP
2	2	2	2	AN3-37A	BOLT
3	3	3	3	AN4-13A	BOLT
4	4	4	4	AN960JD10	WASHER
6	6	6	6	AN960JD416	WASHER
2	2	2	2	MS21042L3	NUT
3	3	3	3	MS21042L4	NUT

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REFERENCE ONLY
DAS 9 9-89

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G OR EARLIER
AND
INSTRUCTIONS OF CONTINUED AIRWORTHINESS ICA-D350-591 REV. 2 OR EARLIER

REF CANADIAN STC: SH92-6
REF FAA STC: SH967NE

For D350-591-121/-122/-123/-124/-133 steps, customers have the option of installing D2732-030 cushions under the D2230-1/-3 clamps to accommodate varying crosstube diameters and to improve fit. It is also acceptable to use longer or shorter AN4 bolts, and/or extra AN960JD416 washers under the nut to ensure 1.5 to 4 threads in safety. See Figure 1 on sheet 2 of this service instruction for reference.

For D350-591-121/-122 steps at CHG 005, D350-591-123/-124 steps at CHG 004, and D350-591-133 steps at CHG 003, the parts list of D350-591 Rev. G and ICA-D350-591 Rev. 2 is amended as follows:

ADD:

Qty -121	Qty -122	Qty -123	Qty -124	Qty -133	Part Number	Description
X					D350-591-121	***Heli-Access-Step*** ™, Short Step – High Skid, LH
	X				D350-591-122	***Heli-Access-Step*** ™, Short Step – High Skid, RH
		X			D350-591-123	***Heli-Access-Step*** ™, Short Step – Low Skid, LH
			X		D350-591-124	***Heli-Access-Step*** ™, Short Step – Low Skid, RH
				X	D350-591-133	***Heli-Access-Step*** ™, Aft Maintenance Step
2	2	2	2	8	D2732-030	CUSHION
2	2	2	2	8	AN4-16A	BOLT

The DSI-9459-011 kit is available for customers with earlier model D350-591-121/-122/-123/-124 steps. Longer AN4 bolts are provided to fasten the clamps. The DSI-9459-013 kit is available for customers with earlier model D350-591-133 steps.

Qty -011	Qty -013	Part Number	Description
X		DSI-9459-011	Rubber Cushion Kit (for -121/-122/-123/-124 steps)
	X	DSI-9459-013	Rubber Cushion Kit (for -133 steps)
2	8	D2732-030	CUSHION
2	8	AN4-16A	BOLT

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: _____
D. SHEPHERD (DE # 02)
DATE: 09.06.24
CERT. NO.: SH92-6
ISSUE NO.: 11

REV.	DESCRIPTION	BY	DATE
B	AN4-16A WAS -17A FOR -013/-133 KIT	CP	09.06.24
A	NEW ISSUE	CP	09.04.17

DESIGN	
DRAWN	
CHECKED	
MFG. APPR.	N/A
APPROVED	
DE APPR.	
DATE	09.06.24

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. DSI 9459 REV. B
SHEET 1 OF 2
TITLE OPTIONAL CLAMP MODIFICATIONS
SCALE NTS

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